4.0 Department of the Navy (DON)

4.1 Overview of Inventory and Related Materials

The Department of the Navy (DON) is comprised of two distinct services: the United States Navy (USN) and the United States Marine Corps (USMC). The two services are combined for reporting purposes. The DON accounted for $55.1 billion,[1] or 40 percent, of the $139.1 billion total Inventory and Related Materials (IRM) reported by the Department of Defense (DoD) for Fiscal Year (FY) 2000. The DON General Fund (GF) reported only Operating Materials and Supplies (OM&S) in FY 2000; the Navy Working Capital Fund (NWCF) reported both Inventory and OM&S.

Throughout this report, we use amounts reported in published FY 2000 financial statements, which we believe provide the best available data available. However, the amounts were not auditable due to valuation methodology issues, among others.

4.1.1 General Fund

The DON GF reported $38.2 billion of OM&S in FY 2000. Almost all ($37.6 billion, or 99 percent) of this amount was reported as held for use or future use, with the remaining amount of $0.6 billion (less than 1 percent) categorized as excess, obsolete, and unserviceable, as Figure 4-1 shows.

[1]The amounts shown for NWCF Inventory include work in process (WIP), which is held by NWCF industrial-type activities. For FY 2000, WIP totaled $1.03 billion. WIP is not subject to the inventory valuation issues that are encountered in the Supply Management area.

DON GF OM&S Categorization as of September 30, 2000 ($ in Billions)

Category	Amount	Percentage of Total	Valuation Method
Held for Use	$34.2	90%	LAC, SP, AC
Held in Reserve for Future Use[2]	3.4	9%	LAC, SP, AC
Held for Repair	-	-	-
Excess, Obsolete, and Unserviceable	.6	1%	LAC, SP, AC
Grand Total	$38.2	100%	

Figure 4-1: Breakout of OM&S, by Category, for DON GF

Source: DoD GF Published Annual Financial Statements, FY 2000

Most of the DON GF OM&S ($21.1 billion, or 55 percent) represented Appropriations Purchase Account (APA) principal and secondary end items, such as shipboard hull, mechanical and electrical items, uninstalled aircraft engines, air-launched missile material, and surface-guided missile components and associated items. APA is a term used by DON to describe assets held as IRM that were purchased using GF appropriations. Ammunitions and munitions accounted for $10.8 billion, or 28 percent of the total, and Sponsor Owned materiel (SOM), which is discussed later in this chapter, represented $5.4 billion, or 15 percent of the total. DON categorized the remaining $0.8 billion (2 percent) as "other." Other consists largely ($0.7 billion) of "residual asset management" items that various DON Commands have on hand and do not need but other DON activities may need.

The DON GF Annual Financial Statements (AFS) for FY 2000 show that OM&S was valued using a combination of methodologies—Latest Acquisition Cost (LAC), Standard Price (SP), and actual.[3] The explanatory note for OM&S states that different valuation methods were used because of deficiencies in systems used to record IRM items.

DON used the best, and sometimes only, data available to compile an OM&S balance. All of the categories and their subcategories present issues for applying a new inventory costing method because of the variety of systems, processes, and data used to record IRM items. DON and other DoD Components do not derive the GF OM&S amounts from transaction-based records aligned with the United States Standard General Ledger (USSGL). In addition, electronic interfaces do not exist

[2] Beginning with FY 2001 financial statements, DoD has eliminated the Held in Reserve for Use category. Explanations for this change are provided in DoD FMR 6B, Chapter 10.

[3] *Department of Navy Annual Financial Report Fiscal Year 2000*, Note 9.B, Operating Materials and Supplies (OM&S), Net, p. 50.

between logistics systems and the accounting or financial reporting systems. Rather, each Component gathers OM&S data using a variety of tools and procedures. For example, DON uses a web-based Data Collection Instrument (DCI) to accumulate OM&S amounts and other information for the GF balance sheet and related notes. The logistics systems and accounting systems do not meet core financial management system requirements, and auditors have been unable to trace OM&S balances to supporting USSGL accounts and records.

4.1.2 Navy Working Capital Fund

The NWCF reported Inventory, Net[4] of $16.3 billion for FY 2000. The largest share ($7.8 billion, or 48 percent) was reported as held for repair. The next largest share ($7.4 billion, or 46 percent) was purchased for resale or future resale and available for that purpose. The remaining $1.1 billion was categorized as Work in Process (WIP) ($1 billion) and excess, obsolete, and unserviceable ($0.1 billion), as Figure 4-2 shows.

NWCF Inventory, Net as of September 30, 2000 ($ in Billions)

Category	Gross	Revaluation	Net	Percentage of Net Total	Valuation Method
Available and Purchased for Resale	$10.8	$4.9	$5.9	37%	LAC
Held in Reserve for Future Resale[5]	2.7	1.2	1.5	9%	LAC
Held for Repair	10.0	2.2	7.8	48%	LAC
Excess, Obsolete, and Unserviceable	0.1	-	0.1	-	NRV
Work in Process	1.0	-	1.0	6%	AC
Grand Total	$24.6	$8.3	$16.3	100%	-

Figure 4-2: Breakout of Inventory, Net by Category, for DON NWCF

Source: DoD NWCF Published Annual Financial Statements, FY 2000 (Not Auditable).

In addition to the above inventory for sale, the NWCF reported an OM&S balance of $0.6 billion, which was categorized entirely as held for use or future use. Non-supply (industrial-type) NWCF activities reported this OM&S amount.

4.1.3 Breakout of Marine Corps IRM

[4] The term "Inventory" is used in this report to distinguish items that the NWCF acquired to be sold from items it acquired for use in its normal business operations. "Net" is used to indicate the inventory values after adjustments for unrealized gains and losses.

[5] Beginning with FY 2001 financial statements, DoD has eliminated the Held in Reserve for Future Resale category. Explanations for this change are provided in DoD FMR 6B, Chapter 10.

The USMC reported a relatively small percentage of the total DON IRM reported in GF and NWCF financial statements for FY 2000, as Figure 4-3 shows.

NAVY – MARINE CORPS IRM BREAKOUT ($ In Billions)

	Navy	USMC	DON Total
General Fund			
OM&S	$32.9	$5.3	$38.2
GF Percentage	86%	14%	100%
Navy Working Capital Fund			
Inventory	$16.8	$7.8	$24.6
OM&S	0.6	0.1	0.7
Sub-Total	$17.4	$7.9	$25.3
NWCF Percentage	69%	31%	100%
Total	$50.3	$13.2	$63.5
Percentage	79%	21%	100%

Figure 4-3: OM&S and Inventory, Net, By Navy and Marine Corps, FY 2000

Source: DoD GF and NWCF Published Annual Financial Statements, FY 2000 (Not Auditable).

All of the USMC GF OM&S totaling $5.3 billion was categorized as held for use. This balance consisted of $4.70 billion of ammunition/munitions and $.637 billion of APA secondary items.[6] The $7.8 billion of Inventory was reported primarily by the Supply Management, Marine Corps. The Depot Maintenance, Marine Corps activity group reported some Inventory (all categorized as WIP) and also reported the $0.1 billion of NWCF OM&S shown above.

4.2 Overall Systems and Processes

The following highlights some of the key systems and steps used in DoD planning, programming, and budgeting for major weapon systems and related IRM requirements.

4.2.1 Planning

Generally, DON and its budget offices follow the strategic planning processes outlined in the Joint Strategic Planning System (JSPS). This overall, strategic planning effort

[6] Data Collection Instrument (DCI) file for USMC (CMC), FY 2000.

includes an array of complex, interrelated processes that involve multiple DoD levels and interactions between DoD, the Office of Management and Budget (OMB) and Congress. At the top level within DoD, the Joint Chiefs of Staff use JSPS to provide strategic plans and direction and to interface with other DoD systems. These include the Joint Operation Planning Execution System. This system is used to determine the best method of accomplishing assigned tasks and to direct necessary actions and translate policy decisions into Operational Plans (OPLANs). The Planning, Programming, and Budgeting System (PPBS) is used to regularly produce a plan, program, and two-year budget for DoD and its Components.

A number of other processes and documents support DoD strategic planning and drive weapons systems planning, funding, development, and acquisitions. For example, a Joint Planning Document (JPD) provides programming priorities, requirements, and advice to the Secretary of Defense for the Defense Planning Guidance (DPG). This guidance provides the link between planning and programming and also provides guidance to all components for developing Program Objective Memorandums (POMs).

4.2.2 Programming

DoD programming includes development of POMs and their integration into a coherent defense program. The Office of the Secretary of Defense (OSD), Unified Commanders, and OMB review draft POMs and often identify issues regarding proposed programs. A Program Review Group resolves many issues and refers open issues to the Defense Resources Board to resolve remaining issues. Final decisions are reached and recorded in Program Decision Memoranda.

4.2.3 Budgeting

The President's Fiscal Forecasts and Guidance, issued in January each year, provides guidance to OSD and the Military Services in developing weapon systems budget estimates. The military departments and defense agencies forward Budget Estimate Submissions to OUSD(C) in September each year. After joint OSD and OMB hearings, Program Budget Decisions (PBDs) are prepared, which document approval of estimates for inclusion in the annual President's Budget that is submitted to the Congress in February each year.

Once the President signs the Congressional appropriations act into law, OMB apportions funds to DoD and other departments and agencies. DON and other military services and DoD agencies can then execute their budgets.

4.3 DON Purchase Programs

To assess the business processes used for fielded weapons systems, PwC coordinated with the DoD points of contact (POCs) to identify a sample of representative, unclassified purchase programs. A purchase program is a distinct set of DoD business events relating to a major weapon system, including all the accounting transactions required to properly

report IRM balances and cost during the system's life cycle.[7] Our objective in reviewing the programs was to provide background information for evaluating process and system change decisions, including valuation computation and maintenance that may arise from a change of accounting valuation policies.

During this Exploratory phase, we identified flaws in current systems, data, and processes. Unless properly addressed, these deficiencies will limit DoD's ability to implement and use a new historical cost methodology:

- Distinctions between IRM items reported in the financial statements of GF and WCF activities are not always clear. This situation can result in misclassifying and erroneously reporting IRM items in GF and NWCF financial statements.
- Limitations of data availability will pose a problem for implementing a historical cost methodology. Current logistics systems do not always maintain original acquisition dates and actual costs of IRM items, such as "sponsor-owned material." Where the data are available, it is not always readily retrievable or reconcilable to financial records.

We will develop additional details on these issues and provide our recommendations in the Analysis and Assessment phase of this project.

4.3.1 Overview of Selected Programs

We obtained information on three purchase programs. As indicated below, these programs provide a cross-section of DON Command and headquarters structures, systems, interfaces, and processes for examination and offer other benefits for exploring IRM accounting/financial reporting issues, including inventory valuation.

AN/SLQ-32(V) Electronic Warfare (EW) System

- Involves R&D activities conducted by the Naval Sea Systems Command (NAVSEA) and ongoing support of a fielded weapons system, including modernization efforts[8].
- Includes OM&S GF accounting by NAVSEA to Inventory NWCF by a supply command, the Naval Supply Systems Command (NAVSUP).

F110-GE-400 Engine and Spares for F-14 Aircraft

- Provides a mix of normal supply functions (ordering, receipt, issue, disposal, etc.) for spare parts and a depot-level repair process for the engines.

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[7] The initial authorization and provisioning of the weapon systems we reviewed occurred many years ago and in some cases, are receiving no new funding. For example, DoD budget documents show that the Other Procurement, Navy appropriation provided funds for the AN/SLQ-32(V), discussed below, for a total of $5.8 million through FY 2002. The documents show funding for spares totaling $0.7 million through FY 2000 and showed no funding for acquisition of spares after FY 2000.

[8] NAVSEA is one of several DON Commands performing these types of functions. The other Commands are Naval Air Systems Command (NAVAIR), Space and Naval Warfare Systems Command (SPAWAR), and Marine Corps Systems Command (MARCORPSYSCOM).

- Involves responsibilities and processes of two separate, major DON commands—NAVSUP and Naval Air Systems Command (NAVAIR)—and a major NAVSUP field activity, the Naval Inventory Control Point (NAVICP).

M1A1 Tank – Initial Issue and Replenishment Spare Parts, Including Engines

- Provides coverage of a distinct DON organization, USMC, and the logistics systems and processes unique to that organization.
- Involves supply support for a weapon system developed and fielded many years ago and having undergone and completed multiple upgrade and modernization initiatives.

4.3.2 AN/SLQ-32(V) Electronic Warfare Countermeasure

The AN/SLQ-32(V) provides a family of modular, shipboard electronic warfare equipment. The system, which consists of five variant configurations, performs the mission of early detection, analyses, threat warning, and protection from anti-ship missiles. The AN/SLQ-32(V) qualifies as a legacy system, meaning that the replacement for the system does not exist and no additional AN/SLQ-32(V) systems are being commercially manufactured. IRM items currently managed in support of the system have completed the funds flow process (authorization through expenditure.) Figure 4-4 represents the key data flow process for the AN/SLQ-32(V) from the funding process through the accounting process.

AN/SLQ 32-(V)
IRM Historical Cost Data Flow

	Processes	Systems
Funding ↓	Planning, Programming, Budgeting	PPBS
Acquisition ↓	Requisitioning, Purchasing, Transportation	•ILSMIS Acquisition and Contracting Modules; •NAVICP central file and logistics toolkit
Logistics ↓	Inventory Type, Inventory Adjustments	•ILSMIS
Accounting	Standard Inventory price, Financial Inventory Records (FIR codes), Physical Inventory Gain/Loss, NWCF Chart of Accounts (examples)	•ILSMIS (SOM, OM&S) •DIFMS (NWCF material) •UICP (NAVICP material)

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Figure 4-4: Key Data Element Flow

4.3.2.1 Organizational Roles and Data Flow

Logistics management responsibilities for the AN/SLQ-32(V) involve several DON organizations and systems and an array of systems and processes for financial accounting and reporting. The organizations include NAVSEA, NAVSUP, the Defense Finance and Accounting Service (DFAS), and components of the two Navy commands that are responsible for various functions supporting the AN/SLQ-32(V) program, as Figure 4-5 shows.

ORGANIZATIONAL UNITS AND ROLES
As of November 2001

Function	Organizational Unit	Specific Role
Acquisition	NAVSEA; NSWC, Crane Division, Acquisition Department; Industrial Logistics Support Management Information System (ILSMIS) Software Support Group (SSG)	Support procurement and acquisition processes using the ILSMIS subsystems
Logistics	Material Management, NSWC Crane Division; ILSMIS SSG	Support logistics functions using ILSMIS and Defense Industrial Financial Management System (DIFMS)
Inventory Valuation	NAVICP for National Stock Number (NSN) catalog items; NSWC field engineers for non-standard items	Capture cost data and develop standard unit price
Repair	AN/SLQ-32(V) (ISEA), Crane Division; NAVSEA Depot Maintenance	Receive, repair, and return reparable items
Disposal	AN/SLQ-32(V) Program Office, NSWC, Crane Division; NAVICP	Determine status as excess, obsolete, or unserviceable
Accounting	NSWC, Crane in conjunction with Defense Finance Accounting Service (DFAS)-Charleston; NAVICP financial systems	Provide accounting services using ILSMIS and DIFMS
Financial Reporting	NSWC, Crane Division and DFAS-Charleston	Provide financial reporting services using ILSMIS and DIFMS

Figure 4-5: DON Organizational Units and Roles for AN/SLQ-32(V).

Source: NSWC, Crane Division

NAVSEA, the largest of the Navy's five systems commands, is responsible for managing acquisitions programs which includes providing the research, development, engineering services to build, deploy, and support a fleet of sea and combat systems. NAVSEA's Naval Surface Warfare Center (NSWC) performs the full spectrum of research, development, test and evaluation, and engineering services for offensive and defensive systems associated with surface warfare. NSWC is an activity of the NWCF's Research and Development business area. The Crane Division, located in Crane, Indiana, is one of

five NSWC divisions and serves as the Lifecycle Program Management activity, In-Service Engineering Activity (ISEA), and a depot-level repair site for the AN/SLQ-32(V). Among the Crane Division's primary product areas of expertise are electronic warfare, microelectronic components, electronic module test and repair.

Along with the Crane Division's support, the NAVSUP NAVICP located in Mechanicsburg, Pennsylvania, provides working capital fund support for IRM items required for the AN/SLQ-32(V). The Crane Division also manages items called Navy Stock Account (NSA) material for NAVSUP. Some of these NSA items may be used to support the AN/SLQ-32(V).

The logistics feeder system used for reporting both OM&S and inventory is ILSMIS. This system feeds OM&S and inventory data to both NAVSEA and NAVSUP for financial reporting, as shown in Figure 4-6.

FINANCIAL REPORTING FOR AN/SLQ-32(V)

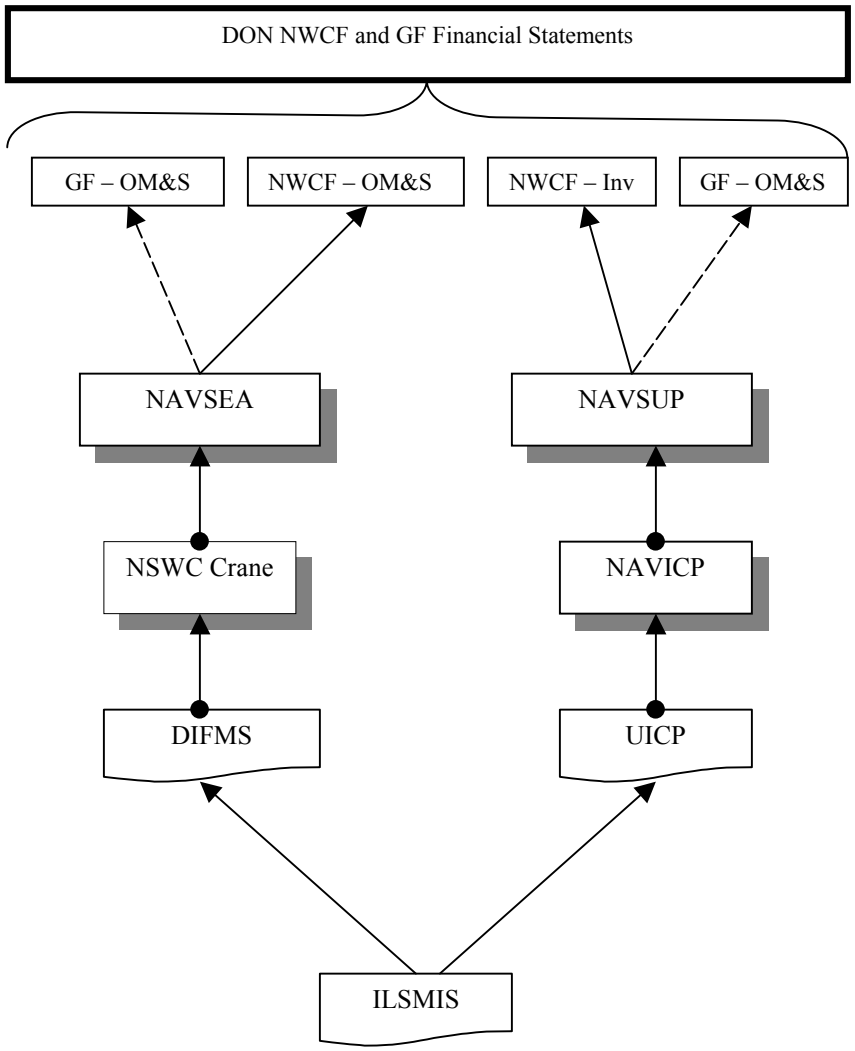

Figure 4-6: GF and NWCF Financial Accounting for AN/SLQ-32(V) Materials

Source: Compiled from NAVSEA and NSWC Crane data.

Legend:

___ Electronic feed.

_ _ _ Manual (DCI) process.

As indicated above, the Crane Division uses ILSMIS to track and record IRM items reported in DON GF and NWCF financial statements. The GF IRM items are reported as OM&S and include both Sponsor-owned material (SOM) reported manually through NAVSEA and APA reported electronically through NAVSUP. In addition, ILSMIS maintains data on IRM items for the NAVICP under NAVSUP. Although not shown

above, other systems used in the financial reporting process include the DFAS Central Data Base (CDB) used to compile NWCF data for financial reporting and the DoD-wide Defense Departmental Reporting System (DDRS) used to compile AFS.

4.3.2.2 Acquisition Process for AN/SLQ-32(V)

At present, the NSWC Crane Division purchases little new material in support of the AN/SLQ-32(V). The initial provisioning process for the system is described below along with current acquisition processes followed by the Crane Division.

4.3.2.2.1 Initial Provisioning

To account for and report AN/SLQ-32(V) IRM cost during its life cycle, a key source is the Provisioning Technical Documentation (PTD) provided by the contractor/supplier developing the system. The PTD describes the maintenance philosophy and support requirement items, such as replacement parts, consumable and bulk materials, and support and test equipment. To keep the system operating, while ensuring minimum down time for repairs, DON must acquire replacement parts, bulk materials and support equipment. The provisioning process begins when the system design is released and a complete bill of materials is available.

Within the PTD, each replaceable component is listed on a Provisioning Parts List (PPL). The PPL is researched and analyzed to provide data on each component such as price, manufacturing lead time, shelf life, reliability predictions, packaging information, and alternate sources for the same part. Included also is a NSN, a 13-character code unique to each item, if available. Where an item is required and delivered for a new weapons system but no NSN has been established, DON logistics and contractor personnel are to follow prescribed procedures to properly establish and record new NSNs. After the PPL has been validated and accepted, the contractor must notify DON whenever a design change occurs.

4.3.2.2.2 Current Acquisition Processes

AN/SLQ-32(V) materials in the current inventory have been acquired largely with prior-year funding. However, when new material is needed, the NSWC Crane Division's Acquisition Department provides contracting and acquisition support for the AN/SLQ-32(V).

The Crane Division uses DoD's competitive and sole source procurement processes for acquisitions with an estimated value at or above $25,000. It uses the federal commercial purchase card program for most of its procurements under $2,500. Other acquisition sources used by Crane include the following.

- The NAVICP Logistics Toolbox which allows online ordering of GSA stock items from Federal Supply Schedule (FSS) Supply System depots and Federal Supply Schedule products and services directly from contractors.
- The DoD Emall, which is an internet site available to acquire certain items managed by the Defense Logistics Agency (DLA).

The Crane Division uses other systems, both commercial and government, to maintain cost and pricing data for items procured either directly by the Crane Division or NAVSUP in support of the AN/SLQ-32(V) program. These systems include the Federal Logistics (FED LOG) System managed by the Defense Logistics Information Service (DLIS) for DLA. Crane Division personnel have on-line access to FED LOG cost and pricing data for some AN/SLQ-32(V) items.

To show the kind of data maintained in ILSMIS on IRM items supporting the AN/SLQ-32(V), the NSWC Crane Division provided a sample Allowance Parts List (APL) for a component of the AN/SLQ-32(V)—the Sidekick. A portion of this APL, which includes the name and both the National Item Identification Number (NIIN) and part number for each item, is shown in Figure 4-7.

Sample Sidekick Allowance Part List Items

REFERENCE DESIGN		NAME	NIIN	PART NUMBER	CAGE CODE
7A 2	DS - 1	LAMP, CARTRIDGE	00-902-6554	MS18237-1CN	96906
7A 2	E - 1	CONTACT, ELECTRICAL	01-201-6609	848029-2	49956
7A 2	E - 2	COVER, ELECTRICAL LO	01-167-0102	570948-3	49956
7A 2	E - 3	TERMINAL, LUG	00-681-8183	MS35431-2	96906
7A 2	H - 1	NUT, FILTER	01-135-3375	848260-5	49956
7A 2	H - 2	PLATE, RETAINING ELE	01-108-0740	848260-6	49956
7A 2	H - 3	PLATE, RETAINING, ELE	01-111-7727	848260-8	49956
7A 2	H - 5	SCREW ASSEMBLY, PANE	01-131-2216	845907-21	49956

Figure 4-7: Sample APL Items for AN/SLQ-32(V) Sidekick

Source: NSWC, Crane

4.3.2.3 Overview of Logistics and Financial Systems

As previously indicated, the Crane Division uses ILSMIS to record and track IRM items supporting the AN/SLQ-32(V). This system feeds data electronically to DIFMS and provides data for manually reporting to NAVSEA for the DON financial statements.[9]

In September 2001, an independent consulting firm released a Federal Financial Management Requirements (FFMR) compliance assessment of ILSMIS. The compliance assessment showed that ILSMIS was compliant with 160 FFMRs and non-compliant with 20 FFMRs. Overall, the system was determined to be "non-compliant with the Federal Financial Management Improvement Act (FFMIA) of 1996."[10]

According to NSWC Crane officials, ILSMIS capabilities include:

[9] ILSMIS also feeds data to the UICP, which is described in the next section.

[10] ILSMIS FFMR Compliance Assessment, Volume I, 26 September 2001.

- Near paperless material logistics solutions
- Full inventory management functions
- Electronic requisitioning of material/services
- Purchasing
- Requisitions documented from time of request through purchase/acquisition to delivery.

ILSMIS creates catalog and inventory records, performs a Job Order Number (JON) validation, provides a method of recording receipts, allows for adjustment and condition codes, and facilitates the Joint-services Computer-aided Acquisition and Logistics Support (JCALS) procurement process. ILSMIS functionality provides for mass disposal of material and transfer of material between accounts. It performs a transfer of material by system, Customer Order Number (CON), CON/JON, project number, or program code.

ILSMIS interfaces with other key systems that support the AN/SLQ-32(V) program including:

- The Naval Ordinance Management Information System (NOMIS) and DIFMS financial systems
- The Naval Material Quality Assessment Office (NMQAO)
- The Uniform Automated Data Processing System (UADPS)-Inventory Control Point (ICP)
- The Inter-Service Material Accounting and Control System (IMACS)
- JCALS.

Crane Division officials said there is no interface of ILSMIS with the DLA warehousing system, the Distribution Standard System (DSS). Rather, ILSMIS has the capability to send transactions to DLA's Standard Automated Material Management System (SAMMS) and any ICP.

DIFMS provides the financial accounting for items supporting the AN/SLQ-32(V). The Crane Division and DFAS-Charleston share responsibility for maintaining DIFMS records. The Crane Division records Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP) items procured in support of the AN/SLQ-32(V) program directly in DIFMS. ILSMIS also feeds certain inventory data to DIFMS via a DIFMS MS650P interface program. The MS650P processes commitments, obligations, receipts, issues, and inventory adjustments from ILSMIS for input into the appropriate material subsystem program for processing. This process can produce Material Suspense Records and Unallocated Material Expenditures as well as delete Material Suspense Records. It creates a file containing the net changes to commitments and obligations.

Two DIFMS reports provide information weekly on the ILSMIS-DIFMS transactions. A DIFMS Detail Material Receipt Transaction Report shows receipts processed into the NAVAIR Industrial Material Management System (NIMMS) and ILSMIS. A DIFMS/ILSMIS Transaction Report provides details on all transactions processed via the

interface. Both reports are used to review general ledger account postings to inventory accounts.

In May 2001, the DFAS Director certified that as an independent financial management systems application, DIFMS complies with appropriate requirements mandated by the FFMIA. The certification was based on an assessment done by DFAS staff assisted by an independent consulting firm.[11]

According to Crane Division officials, a system called Joint Computer-Aided Acquisition and Logistics Support (JCALS) allows NAVICP item managers to query material and inventory data maintained by Crane Division. The process is that if there are no assets available within the normal Consolidated Point of Entry (CPEN) System and Residual Asset Manager (RAM) inventories, the requisition is referred to SOM (the JCALS Server at NAVICP Mechanicsburg) with status provided to the customer that the requisition is being forwarded. If material is available, the referral is routed to the activity inventory management system (ILSMIS or the NAVAIR Industrial Material Management System (NIMS)/DIFMS). The local activity is to contact the sponsor for a determination if the material can be released. We did not verify whether the process is actually working as described to us. Crane Division officials said that they are working on a pilot with NAVSUP to "host the SOM inventory" the Reengineered Residual Asset Management System (RRAM). They said this should provide better visibility and accessibility to all ICPs including DLA.

The NAVICP access to and use of IRM items, including SOM, maintained in ILSMIS raises questions about the financing, accounting, and reporting of these transactions. We will assess how the actual financial accounting is handled for these and similar lateral distribution actions during the Analysis and Assessment phase of the project. We will then be in a position to determine what changes in policies, processes, and systems may be necessary to properly account for and report these transactions.

ILSMIS also has an interface for NAVICP IRM items through the Transaction Item Reporting (TIR), allowing data to be fed from ILSMIS directly into NAVICP's financial system, Uniform Inventory Control Program (UICP). According to Crane Division officials, they reconcile their inventory balances with records maintained by the NAVICP offices in Philadelphia, PA, and Mechanicsburg, PA, annually and with DLA records semi-annually.

DIFMS captures numerous data elements that are used for accounting and accountability for IRM items. For example, the "contractual other code" that resides in the DIFMS Material and Other Cost subsystems includes the codes shown in Figure 4-8.

[11] Memorandum for Chairman, Senior Financial Management Oversight Committee, "The Compliance of the Defense Industrial Financial Management System with the Federal Financial Management Improvement Act of 1996", signed by Director, DFAS and dated May 24, 2001.

Contractual Other Codes

Code	Title
78	Physical Inventory Adjustments
79	Physical Material Transfer Adjustment
80	Purchase Price Variance
81	Retail Loss Allowance
82	Scale Scrap
83	Set Up Charge
84	Standard Price Adjustment
85	Tool Box Refund
86	Trade Discount

Figure 4-8: DIFMS Inventory Related Contractual Other Codes

Source: NSWC, Crane

The data element for standard inventory price is captured in the Job Order Customer Order (JO/CO) subsystem of DIFMS. A potentially key data element captured in the Material Subsystem of DIFMS is the financial inventory record (FIR) codes. These codes are used to record and track such things as the source of IRM items received and the type of inventory adjustment, issues, transfers, etc. These codes may be useful for valuation of DIFMS items using a historical cost valuation method.

4.3.2.4 GF-NWCF Financial Reporting Issue

To properly report AN/SLQ-32(V) IRM cost, responsibilities for providing logistics support as well as related budgeting, accounting, and financial reporting must be clearly delineated. A key date for this delineation is the "material support date" (MSD), which indicates which DON reporting entity (GF or NWCF) and command (e.g., NAVSEA or NAVSUP) will report the IRM in financial statements. Unless this date and the related events and processes are clearly defined, IRM items may be misclassified in the logistics systems and may be improperly reported in financial statements. However, we did not find in the DoD Financial Management Regulation (FMR) or other policy and procedures manuals we reviewed, clear and complete guidance for implementation of this date.

The AN/SLQ-32(V) Electronic Warfare System involves complex and overlapping responsibilities for logistics management and financial reporting responsibilities within DON. During this system's life cycle, the logistics support becomes a shared NAVSEA and NAVSUP responsibility. The source of financing has involved both direct appropriations and working capital funds. The items required to support the system have

included both OM&S and inventory held for sale. The reporting entities have included both the DON GF and the NWCF.

The MSD should help to delineate management and financial responsibility during the system's life cycle. In a commercial, private sector setting, this date would be the time when a product moves from R&D and consumer testing to marketing of the product. Generally, this shift involves different departments of the same organization, different ways of financing the venture, and different classification and reporting of costs. A similar situation exists in DON with development, introduction, and use of the AN/SLQ-32(V).

NAVSEA material support is provided in the form of funding, procurement, custody, and delivery of:

- Support and test equipment
- Depot spares
- Installation and check out (INCO) material
- Non-standard parts
- Unsupported standard parts.

According to NAVSEA04, non-standard parts are, by definition, not supported by the supply system, and therefore do not have a MSD associated with them. Unsupported standard parts are procured locally (for example, by NSWC, Crane) and not through NAVICP or DLA channels. There is no MSD associated with unsupported standard parts either.

NAVSEA, as part of its basic mission, does research, development, testing, fielding, shipboard installation, and initial outfitting of spares and repair parts for new weapons such as the AN/SLQ-32(V). During these phases, NAVSEA used direct appropriations to finance these activities. The IRM items acquired are reported as OM&S and included in the DON GF reporting entity's financial statements. Subsequently, when the system reached its MSD, the responsibility for logistics support shifts to NAVSUP, which provides ongoing support of deployed or fielded weapon systems. At that point, the IRM items supporting the system generally are recorded as inventory (held for sale) and included in the DON NWCF financial statements.

Transitions at the MSD are not always complete. For example, NAVSEA officials told us that after the MSD for a weapon system, the Crane Division will continue to provide logistical support for certain items, and DON will continue to report these items as OM&S in financial statements.

According to NAVSEA, the transfer of IRM items from NAVSEA to the Supply System does not pose particular valuation problems because the cost of an item (procured, for example, by the NWCF) remains the same whether it comes from NAVSEA, NAVAIR, Space and Naval Warfare Systems Command (SPAWAR), or other major claimant. This cost to procure the item serves as the historical cost.

DoD FMR 11B, Chapter 56, provides guidance on OM&S but does not define or provide clear guidance for implementation of material support date. DoD FMR 11B, Chapter 55, provides guidance on Inventory and Supply Management and states that the Supply Management business area will acquire initial and replenishment spares "consistent with the materiel support date." The regulation defines initial spares as those acquired to support newly fielded weapons systems during initial period of operation until the supply system can support the demand generated by the systems. Replenishment spares are defined as those spare and repair parts required to re-supply the initial stock. NAVSUP Instruction 4400.93A (Interim Supply Support for Weapons Systems and Equipment), enclosure (1), defines the MSD as "the date the Navy assumes responsibility for all spares and repair parts support of a new weapons system, subsystem or support equipment end item at Fleet operational sites."

Although the FMR and NAVSUP provide some guidance, they do not clearly delineate the responsibility of NAVSEA and NAVSUP for financial accounting and reporting before and after the MSD. This lack of clear guidance could result in misreporting of OM&S and inventory items in DON GF and NWCF financial statements. We plan to further explore this issue in the subsequent phases.

4.3.2.5 SOM Financial Reporting Issues

SOM items present several accounting and inventory valuation issues for DON and possibly other DoD Components. SOM represents IRM items that have been acquired with direct appropriation funding provided by a "sponsor" (primarily Program Management Offices) of NAVSEA's research, development, test and evaluation, engineering, and fleet support work. A sponsor is an activity that tasks another activity, in this instance the Crane Division, to perform a function involving the fabrication, production, repair assembly or development of an IRM item. The activity performing the work cites the funds of the sponsor on requisitions. The sponsor may procure and provide material to the activity as part of the tasking. DON or command headquarters may designate a shore activity to perform the sponsor role. In this case, a program or project manager located at that shore activity might task the same shore activity to perform the sponsor functions described.

Although "expensed" for budgetary reporting purposes, the items are still in the supply chain, thus not in the hands of end-users, and are reported as IRM in DON financial statements. As reported, SOM represents a significant portion of the IRM balance presented in DON GF financial statements, totaling $5.4 billion in FY 2000.

4.3.2.5.1 SOM Accounting Issues

Our work with the AN/SLQ-32(V) showed that statistical (or memorandum) accounts are used to record and track the quantities and dollar values of SOM items in ILSMIS. Use of these accounts provides some visibility of the assets, but single-entry memorandum accounts are not subject to normal general ledger control. They are not, for example, included in any trial balance for compiling financial statements and do not capture many of the accounting transactions involved in managing SOM items.

NAVSEA Instruction 4440.24C (Sponsor Owned Material) includes definitions for the following material memorandum accounts, which are accounted for through the ILSMIS SOM Module:

- Account No. 6021 consists of assets assigned to production jobs, or other projects being performed at an activity that are scheduled to begin within 24 months. A customer order number must be assigned and carried on the inventory record to identify the material to a job.
- Account No. 6022 consists of excess material from a completed job awaiting disposition or retention authorization from the program manager. Unless economically warranted, material classified in Account No. 6022 should not remain in this account for more than 180 days after record establishment.
- Account No. 6023 consists of material stored at an activity not related to the station's direct production workload. Material held in this account includes, but is not limited to, material resulting from: economic order quantity buys, life of type buys, Diminishing Manufacturing Sources and Material Shortages (DMSMS) buys; foreign material sales; or material being procured, staged, kitted, and transshipped for a project at a shipyard or installation site. The holding activity receives direct funds for "custodial" (e.g., storage, inventory management, and shipment functions) services only.

In its April 1997 audit *Management, Control, and Accounting Procedures for Sponsor Material at NAVSEA Warfare Centers*, the Naval Audit Service added that "Naval Sea Systems Command (NAVSEA) Warfare Centers perform research, development, test and evaluation, engineering, and fleet support work for sponsors (primarily Program Management Offices). The work usually involves the fabrication, production, repair, assembly, or development of an item. Material furnished by the sponsor or obtained for direct production using sponsor funds is referred to as Sponsor-Furnished Material and should be accounted for by Centers in Memorandum Account 6021. If this material becomes excess to completed production jobs it is referred to as Sponsor-Owned Material and should be accounted for by Centers using Memorandum Account 6022."

SOM balances are reported "outside" the system through a manual process because of the lack of electronic interfaces between ILSMIS and DFAS systems. To provide information for periodic financial reporting, NAVSEA Warfare Center supply departments submit a Quarterly SOM Report (QSR) to NAVSEA 04L (Logistics) who in turn provides the information to NAVSEA 01 (Comptroller). Local Warfare Center comptrollers are not involved in SOM financial reporting.[12] The report includes:

♦ Beginning SOM balance	♦ Transfers Out
♦ Transfers In	♦ Revaluation
♦ Issues	♦ Prior Period Adjustments

[12] NAVSEAINST 4440.24C provides requirements and guidance for SOM, including submission of the QSR.

♦ Disposals	♦ Ending Balance

The QSR is detailed by category (Held for Use, Held for Future Use, Held for Repair, Excess, Obsolete, and Unserviceable). The report includes data for the current quarter and cumulative to date for the fiscal year. The data are aggregated with data from other activities at NAVSEA and annually sent to the DON Office of Financial Operations (FMO) and then to DFAS-CL through a data call (the DCI) for reporting in the DON GF AFS. Crane Division reported the following account balances as of September 2001:

- Account 6021 - $335.77 million
- Account 6022 - $0.141 million
- Account 6023 - $859.72 million.

4.3.2.5.2 SOM Valuation Issues

Historical cost data necessary for valuing SOM items in accordance with the Statement of Federal Financial Accounting Standards Number 3 (SFFAS No. 3), Accounting for Inventory and Related Property, generally are not available in ILSMIS. This lack of historical cost data will pose a problem when implementing a historical cost method.

SOM items managed by the Crane Division include both standard material, which has a NSN and standard catalog price, and nonstandard material. Nonstandard SOM comprises approximately 43 percent of Crane Division's SOM and consists of items acquired through various sources (for example, local fabrication, SHIPALT cancellations, decommissioned ships, base closures, contract closeouts, and items procured locally from industry). Nonstandard items do not have an associated NSN or standard price. In some cases, acquisition cost exists for nonstandard items. In other cases, the valuation is based on estimates provided by technicians and engineers or is derived from the cost of material and labor used to manufacture the item.

Crane Division officials said that valuation methods differ for the three memorandum accounts mentioned above. Account 6021 SFM items are valued at purchase price. Account 6022 SOM items retain the value assigned in their originating account, either Account 6021 or 6023. Account No. 6023 Custody Material items are valued by reference to the condition table shown in Figure 4-9.

Valuation of Custody Material

Condition Code	Percentage of Actual Cost	Description
A	100	**Serviceable** – Item can be issued without qualification.
B	100	**Serviceable** – Item can be issued with qualifications; item has shelf life of less than 3 months remaining.
C	100	**Serviceable** – Requires test and modification involving limited cost or effort to restore the item to serviceable condition.
D	100	**Serviceable** – Item requires test, modification, disassembly, or technical data marking.
E	25-50	**Serviceable** – Item requires limited expense or effort to restore the item to a serviceable condition.
F	20 – 40	**Unserviceable** – Item requires an extensive amount of repair or the required repair is unknown.
G	20 – 40	**Unserviceable** – Item requires parts that have been requisitioned.
H	10	**Condemned** – The item is unserviceable and determined to be beyond economical repair or has an expired shelf life that cannot be extended.
J	10	**Suspended** – The item is already on stock records and the previous condition code assigned to the item is suspect. Condition code "J" assets shall be reclassified before reporting the material to the sponsor.
K	10	**Suspended** – The item has been returned to stock and is awaiting condition classification. Condition code "K" assets shall be reclassified before reporting to the sponsor.
L	100	**Suspended** – The item is held pending litigation or negotiation with vendors or common carriers. Material cannot be issued or shipped until the matter is resolved.
M	20-40 or carcass value	**Unserviceable** – The item is in the repair cycle.
P	10	**Unserviceable** – The item is not economically repairable and is held for the reclamation of serviceable components or assemblies.
R	10	**Unserviceable** – The item was turned in by reclamation activities that do not have the capability to determine the condition of the material. Assets must be reclassified before they are reported.

Figure 4-9: Valuation of Custody Material Based on Condition Code

Source: NAVSEA Instruction 4440.24C, May 1998

In addition to the valuation methods described above, Crane Division officials said AN/SLQ-32(V) IRM items are assigned a standard price and net price. Standard price is developed through the DoD Standard Unit Pricing (SUP) process and consists of the latest acquisition cost and a cost recovery rate. Net price applies only to repairable items that are returned when unserviceable in exchange for a new item. The net price consists

of the latest or estimated average repair cost for the unserviceable item plus the applicable cost recovery rate. For GF CFO reporting, DON does not revalue SOM items tracked in ILSMIS but rather reports the values as OM&S at standard price.

According to DoD FMR Volume 11B, chapter 55, Supply Management Operations, the standard price development process is as follows:

> "As a general rule, each cataloged item with a national stock number assigned which is managed by a DoD Inventory Control Point shall have a standard price for sales to all authorized customers, except as may be authorized elsewhere in this chapter. Components shall establish product prices at the lowest practical item level in order to promote cost visibility/management and to motivate cost effective customer/supplier behavior. At a minimum, prices should be established by Federal Supply Class (FSC) or other comparable level at which specific cost allocations can be made. Product pricing levels above the FSC must be approved by the Office of the Under Secretary of Defense (Comptroller)."

All items reported in the QSR are to be valued at standard price if an NSN is available or at best estimates if standard price is not available. The revaluation amount in the report is the net effect of adjustments to inventory value as a result of price change computations. The ending SOM balance is presented at gross and net, with the difference representing the allowance for gains and losses. However, NAVSEA officials said this column is not used for financial reporting. Rather, SOM is reported in GF AFS at standard price or other value that the Crane Division records in ILSMIS records, including those values determined by the condition codes established in NAVSEAINST 4440.24C.

To meet accounting and auditing standards, the basis for assigning cost to inventory should have economic substance, meaning it should be the result of a business transaction, e.g., a purchase. It is doubtful that the estimates generated by the Crane Division would be acceptable for audit opinions or system compliance determinations. For these nonstandard items, original cost data from accounting records, or even invoices, receiving reports, or other source records, may not be available. This being the case, an acceptable alternative valuation procedure, such as statistical sampling of like items that meets the standards or estimates by qualified appraisers or engineers, will be needed.

4.3.3 F110-GE-400 Engine and Spares for F-14 Aircraft

The F-14 *Tomcat* is a supersonic, twin-engine fighter aircraft. Armament includes a mix of air intercept missiles, rockets, and bombs. Since 1968, several new F-14 versions have been developed and fielded. The F-14A aircraft is the basic platform of the F-14 series and is equipped with two TF30-P-414A engines. Sixty "core" F-14A aircraft are being upgraded. The F-14B is a remanufactured F-14A or new production aircraft, both equipped with F110-GE-400 engines, which replaced the TF30-P-414A engines. Sixty-seven F-14B Aircraft are being modified. The F-14D also can be either a remanufactured F-14A or a new production aircraft. Both are equipped with F110-GE-400 engines, new radar, and new avionics systems. An older TF30 or a newer, more reliable General Electric F110 powers the F-14.

Figure 4-10 represents the key data flow process for the F-110-GE-400 engine and spares supporting the F-14 aircraft, from the funding process through the accounting process.

F‑14 Engines Historical Cost Data Flow

	Processes	Systems
Funding ↓	Planning, Programming, Budgeting	PPBS
Acquisition ↓	Requisitioning, Purchasing, Transportation	NAVICP
Logistics ↓	Inventory Type, Inventory Adjustments	• UICP
Accounting	Standard Inventory Price, Financial Inventory Records (FIR codes), Physical Inventory Gain/Loss, NWCF Chart of Accounts	• U2 • MFCS • UICP

Figure 4-10 Key Data Element Flow

4.3.3.1 Organizational Roles and Data Flow

The Naval Air Warfare Center, Aircraft Division (NAWCAD), located at Patuxent River, Maryland, supports the F-14 aircraft, including uninstalled engines. NAWCAD is a component of the Naval Air Systems Command (NAVAIR). Inventory control responsibility for F-14 aircraft engine parts (excluding engines) is assigned to the Naval Inventory Control Point (NAVICP), Integrated Weapons Support Team (IWST) in Philadelphia, Pennsylvania. Figure 4-11 shows the organizational units and roles within the F-14 Aircraft Engines Program.

Organizational Units and Roles

Function	Organizational Unit	Specific Role
Acquisition	Whole Engines: NAVAIR, Contracts for Aircraft Support Major Weapons Systems (AIR 2.5) Engine Components: NAVICP, 02 for Engine Components	Support the weapons program through procurement actions, including local purchases and contract award and administration
Logistics	Whole Engines: NAVAIR, Logistics (AIR 3.0) Engine Components: NAVICP, Engines IWST	Support the Logistics functions through the Aircraft Engine Management System **(**AEMS), the Aircraft Inventory Readiness & Reporting System (AIRRS), and the Aeronautical Time Cycle Management (ATCM)
Valuation Method	NAVICP for NSN catalog items; field engineers for non-standard items	Capture accurate cost data and develop standard unit price for key program items
Repair	NAWCAD	Return reparable item to operability
Disposal	NAVICP, F-14 IWST for Aircraft Engines and Spares	Determine status as excess, obsolete, or unserviceable
Accounting and Financial Reporting	NAWCAD for F-14 engines NAVICP, IWST for F-14 aircraft parts, except engines DFAS-Cleveland	Support accounting requirements AEMS, the Material Financial Control System module (MFCS), and Reengineered Residual Asset Management System (RRAM)

Figure 4-11 Organizational Units and Roles – F-14 Aircraft Engines and Components

Source: NAVICP IWST, Philadelphia, PA

The Aircraft Engine Management System (AEMS) is used to record logistics data on the F-14 engines and to report OM&S data through NAVAIR for DON GF financial reporting. The Material Financial Control System (MFCS) feeds inventory data from UICP subsystems on F-14 parts for DON NWCF financial reporting, as Figure 4-12 shows.

FINANCIAL REPORTING FOR F-14 ENGINES AND PARTS

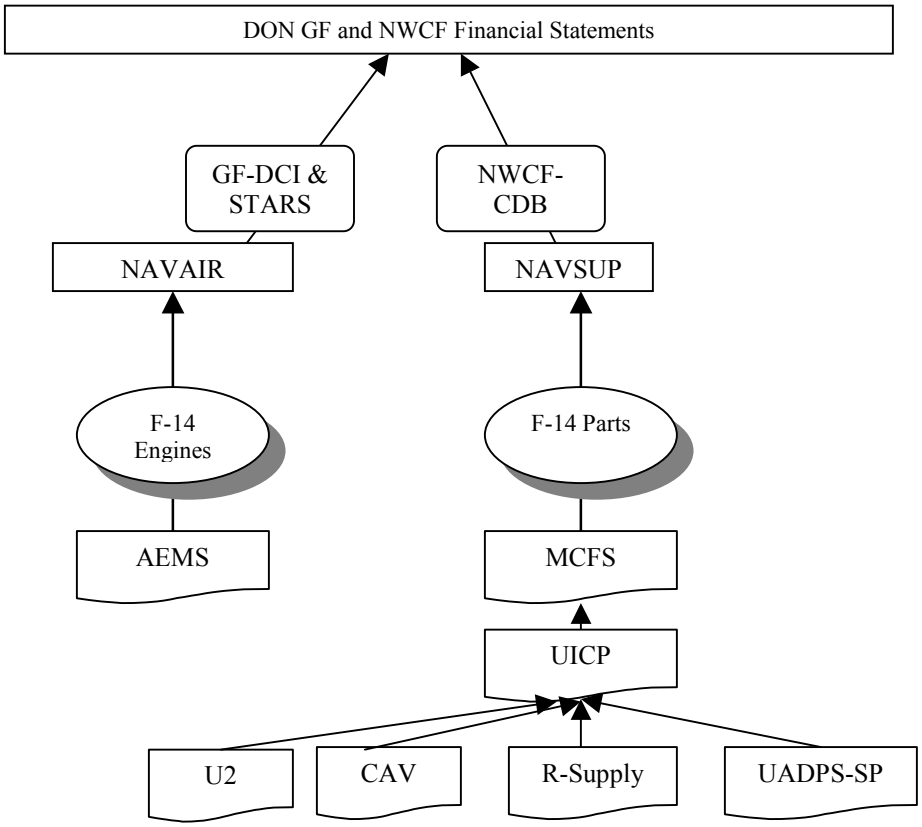

Figure 4-12: GF and NWCF Financial Accounting for F-14 Aircraft Engines and Parts

Source: Compiled from NAVAIR and NAVSUP data.

The NAVICP under NAVSUP generates a monthly DataStream from MFCS, which is a summary of financial data at the five-digit SGL level for posting to the DFAS-CL CDB. Additionally, monthly Trial Balances are generated for all material categories including Budget Project (BP) 34 (aviation consumable parts) and BP85 (aviation depot level reparable parts). NAVICP personnel review this trial balance monthly. There are no specialized reports for the F-14; however, the DataStream information includes F-14 data. NAVICP is required to perform twelve separate reconciliations of accounting and logistics data. All inconsistencies are to be reconciled at least quarterly.

The MFCS PX02 is the Allotment Accounting System used to record obligations and disbursements based on actual contract or purchase order amounts, vendor billings, and payments. The MFCS PX06 is the Inventory Accounting System used to record inventory transactions at standard unit price.

4.3.3.2 Acquisition Process for F-14 Aircraft System

NAWCAD provides acquisition and other logistics support for the F-14 program. A key system used in this process is AEMS, which provides current and historical information on the location, operational status, and usage of aircraft engines and engine modules for logistics management and analysis purposes.

Another system, AIRRS, provides aircraft inventory, readiness data, and flight/utilization data for each aircraft in the naval inventory. A third system is ATCM, which provides data on "life limited and forced removal" aircraft and engine components/sub-components, tracked by Scheduled Removal Component (SRC), Assemble Service Record (ASR), and Module Service Record (MSR) in the Navy inventory.

According to the NAVICP's Engines Integrated Weapons Support Team (IWST), a NAVAIR Maintenance Plan drives the maintenance philosophy for a given system. This plan provides SM&R Coding as well as predicted failure rates for reparables and consumables. When a Non-Ready-for-Issue (non-RFI) component is determined to be Beyond the Capability of Maintenance (BCM) at the organizational or intermediate levels, the component is "BCM'd" to a designated repair site. The non-RFI may or may not be scheduled for repair depending on the supply status of the item. The non-RFI material is stowed at a co-located storage facility of the designated overhaul point until inducted into the repair cycle.

The F110-GE-400 engine components are repaired at Tinker Air Force Base, Oklahoma City, OK and managed via a Depot Maintenance Interservice Support Agreement (DMISA). Repair requirements are computed by IWST inventory managers semi-annually. An annual repair schedule is negotiated with the Designated Repair Point (DRP) in July before the start of a new fiscal year. Changes to the repair schedules may occur throughout the year but, at a minimum, are recomputed in the January/February timeframe each year.

A repair manager in the Industrial Support Department is assigned to manage the DMISA with Tinker Air Force Base and manages the F110 engine program repairs. The repair manager monitors schedules, inductions, and repair turnaround times and acts as the liaison between the IWST inventory managers and the repair activity.

The NAVICP uses a stratification process to set retention levels semi-annually (30 Sept and 31 Mar) and identify excess IRM items. Fleet/repair personnel conduct hands-on inspections to determine the serviceability of IRM items. Equipment specialists at the IWSTs identify items that are obsolescent. A disposal evaluation follows each of these steps and involves a manual review at the item manager level. The determination that an item is beyond economic repair is made as part of the repair process that takes place daily at fleet/commercial depots. The NAVICP runs an Obsolete Data Purge program at the end of each month to identify, by NSN, items that are excess and obsolete.

Once assets are marked for disposal, the NAVICP issues directives (DOCID A5J) to holding activities, which begins a process that results in the physical disposal of the material and adjustment of NAVICP files to reflect valid transfers to disposal.

4.3.3.3 Overview of Logistics and Financial Systems

The UICP is a centrally designed and maintained computer system established by the NAVSUP to automate logistics functions at the NAVICP Operating Sites. UICP consists of a database, application programs designed to accomplish specific logistic functions, and the documentation necessary to understand and use the system. The Navy Fleet Material Support Office (FMSO) is the Central Design Agency (CDA) for the system. UICP is a legacy system to be replaced by a planned NAVSUP system called SMART, which was in a pilot phase as of February 2002.

The UICP feeds financial data to the MFCS, which is a joint DFAS and NAVSUP system operated under a Memorandum of Agreement. It is a centralized inventory financial accounting and billing system that includes a general ledger.

We identified logistics/inventory management reports that include key data elements for the F-14 and similar weapon systems programs. These reports and data elements include the NAVICP's Material Accounting Department's WEBFOCUS reports that are used to track obligations by cost codes. These cost codes can represent either weapon systems like the F-14, or special programs or initiatives. These reports are used to monitor execution of specific programs.

The NAVICP Budgeting Staff uses reports generated from the Stratification process twice a year based on March and September month end data, sales and inventory data from the PX06 data base and various other financial information from PX02, e.g., Outstanding Obligations, Accounts Payable, and Progress Payments. IWST sales reports are generated monthly to identify inventory sales by weapons system. The Stratification reports, which are simulations of budget requirements, are produced by Budget Project and used in budget development.

NAVAIR uses AEMS along with other systems to track and report on engine/propulsion system modules (EPSMs), which are the single most expensive aircraft component in both unit and total cost. AEMS provides real-time and historical status of all EPSMs. The system provides information on location, operational status, and usage of aircraft engines and engine modules for logistics management and analytical purposes.

4.3.3.4 Valuation Methods

The NAVICP or DLA, depending on the original source of the items, determines the cost and price of F-14 aircraft engines and components. The logistics systems used by the NAWCAD and the NAVICP include the latest acquisition cost for engines and components. The selling price of engines and components may be either "standard price" or "net price." Standard price is developed through a DoD Standard Unit Pricing (SUP) process and consists of the latest acquisition cost and a cost recovery rate (surcharge). The cost recovery rate is a mark-up of latest acquisition cost to recover the cost of transportation, obsolescence, testing, and acquisition source qualification.

Net price, also known as the exchange price, applies only to reparable items that are returned when unserviceable in exchange for a new item. The net price consists of the latest or estimated average repair cost for the unserviceable engine plus the applicable

cost recovery rate. The standard price minus the net price is referred to as the carcass value of the unserviceable item.

4.3.4 M1A1 Tank – Initial Issue and Replenishment Spare Parts, Including Engines

The M1A1 Tank was introduced in November 1990 and has a unit replacement cost of $4.3 million. The M1A1 is an improved version of the M1 Main Battle Tank (MBT). It is compatible with all US Navy amphibious ships and craft, including Maritime Prepositioning Ships.

4.3.4.1 Organizational Roles and Data Flows

Overall USMC logistics planning and management is the responsibility of the Installation and Logistics Department at Headquarters USMC and the Marine Corps Systems Command (MARCORSYSCOM). The USMC Materiel Command at Albany, GA, provides life cycle management of ground weapons systems, munitions, and information systems to ensure material readiness of operating forces. Marine Corps Logistics Bases are located in Albany, GA, and Barstow, CA.

The USMC uses the Stock Control System (SCS) to track and report inventory (held for sale) reported by its NWCF Supply Management activity. SCS is a joint service system with the Headquarters Air Force Materiel Command serving as executive agent.

The USMC system for OM&S is the Asset Tracking Logistics and Supply System, Phase II (ATLASS II+). ATLASS II+ is an integrated Supply, Maintenance, and Material Readiness automated information system. The system provides a real-time view of the materiel posture, supply and maintenance posture, supply and maintenance requirements, and readiness information to battlefield commanders for strategic and tactical decisions.

ALASS II+ interfaces with the Supported Activities Supply System (SASSY) and sends financial data to the Standard Accounting and Budgeting System (SABRS). SABRS was selected in 1995 as the migratory accounting system for the USMC GF and is operated by DFAS-Kansas City. The overall data flow from ATLASSII+ to SABRS and other systems is presented in Figure 4-13.

Financial Data Flow for DON GF Financial Statements

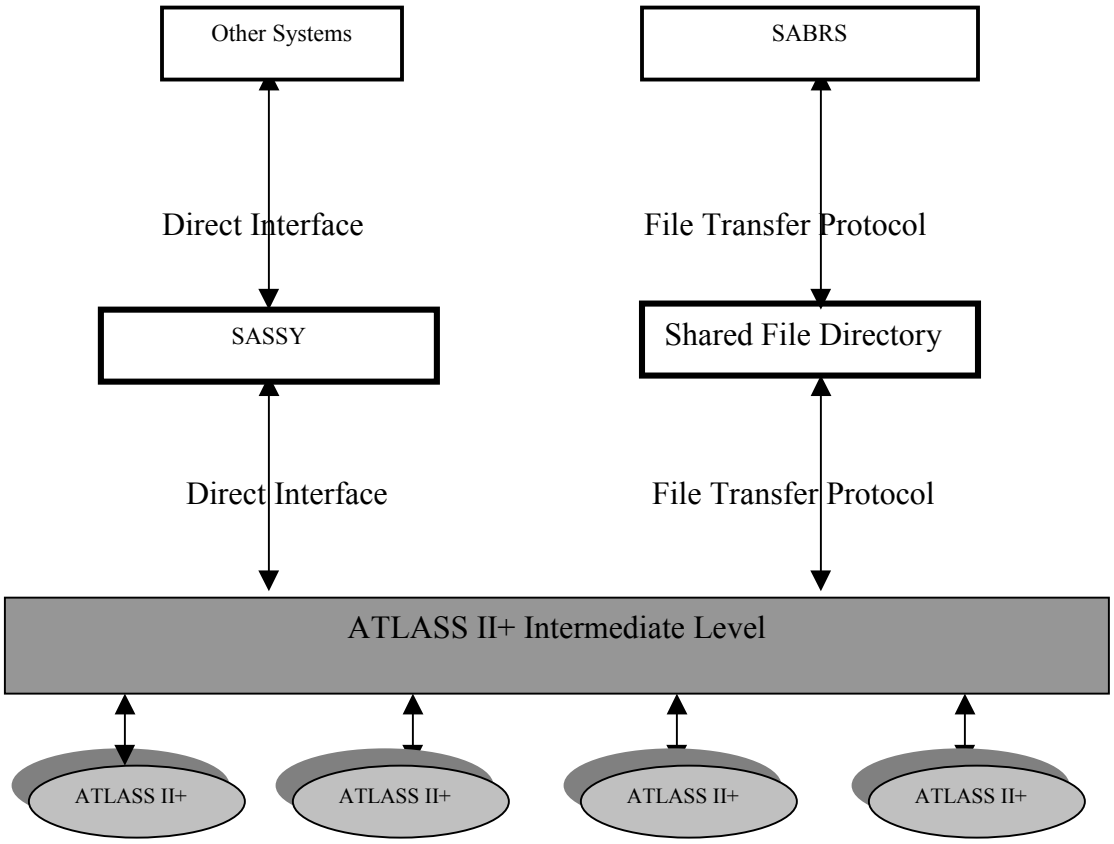

Figure 4-13: Data Flow

Source: Based on ATLASS II+ Federal Financial Management Compliance Assessment, September 28, 2001.

As indicated above, ATLASSII+ data can be entered into SABRS via file transfer protocol (FTP). However, the DoD IG reported in April 2001 that USMC organizations provided hard copy documentation (e.g., U.S. Treasury warrants, apportionment schedules, and funding authorization documents) to DFAS Kansas City for the FY 2000 DON GF financial statements. Although DFAS Kansas City had spent more than $21 million since FY 1997 to upgrade SABRS, DFAS Kansas City personnel manually entered data into spreadsheets rather than using SABRS general ledger data for all of the FY 2000 financial reports. In responding to the IG report, DFAS said it was continuing to

develop report tools to use SABRS general ledger data for producing reports and anticipated completing these efforts by September 30, 2002.

4.3.4.2 Overview of Logistics and Financial Systems

The DoD Financial Management Improvement Plan for FY 2000 shows that SCS is noncompliant with applicable requirements. The plan described an SCS modernization initiative that (1) processes requisitions, (2) provides customer status, (3) maintains customer status, (4) maintains visibility of assets, and (5) provides Joint Total Asset Visibility for both the Air Force and Marine Corps. The initiative was to be completed in FY 2003.

The supply module of ATLASS II+ provides a single material management system for the intermediate and consumer/user levels of supply and maintenance. The supply module functionalities include the following:

- **Intermediate Supply Level** – This function provides visibility of items maintained by the Intermediate Supply Support Unit. Data elements included at this level including quantities on hand by location and shelf life information such as lot numbers and expiration dates. The system enables purchases, within a range of dollar values, to be completed in sufficient quantities to meet the requisition objective, restore stock based on reorder points, and cover back orders.
- **Using Unit Level** – This function allows front-line users performing maintenance to review supplies on hand and submit requisitions of supplies from the Intermediate Supply Level.

Supply items tracked in ATLASS II+ include secondary repairable items required for organic equipment (such as the M1A1 Tank, trucks, etc.); operating stock such as base and office material and maintenance supplies; and garrison property such as computers, desks, etc.

USMC operates a second supply system, SASSY, which provides retail supply accounting functions such as requirements determinations, replenishments, receipts, inventory stock control, and asset visibility for all USMC units. According to USMC Headquarters officials, SASSY is a legacy system that will be replaced by ATLASS II+.

4.3.4.3 Valuation and Other Accounting Issues

DON will need to make system changes to implement a historical cost valuation method in ATLASS II+. Additionally, because ATLASS II+ does not track historical cost, DON will need to use other data sources and methods to establish a baseline of acceptable inventory values at the point of converting ATLASS II+ to a new valuation method. This condition was one of several areas identified by the USMC as requiring system changes for ATLASS II+ to comply with federal financial management requirements.

The MARCORSYSCOM contracted with an independent consulting firm to assess ATLASS II+ compliance with federal financial management requirements. The September 2001 report of assessment identified non-compliance with the requirements in the following four areas:

- Valuation of OM&S: ATLASS II+ values all the items it tracks at standard price and does not track historical cost of items. The system also does not revalue items to net realizable value for OM&S categorized as excess, obsolete, and unserviceable.
- Financial Statement Classification: ATLASS II+ can track OM&S items by condition codes but the coding is not used to update SABRS for the DON GF AFS.
- Reconciliation: No reconciliation process exists relating to ATLASSII+ and SABRS recorded OM&S balances.
- Accounting for Repair Costs: Within its Maintenance module, ATLASS II+ tracks the cost of material and labor for repair activities by individual item. However, this information is not used to update SABRS accounting records.

4.4 Evaluation of DON Processes, Systems, and Data

DON uses inventory cost data in a broad range of management functions, systems, and processes, including supply management, accounting, programming and budgeting, pricing, and financial reporting (both internal to DON and DoD and for external purposes). Our exploratory phase has identified areas in which current systems, processes, and data will be impacted significantly and will need to be modified to implement a new inventory valuation model, including the establishment of the initial baseline of beginning balances at the point of conversion.

4.4.1 Budgeting Processes

One significant area of potential change is the manner in which inventory values are reported and used for budgeting purposes. At present, the formula being used, in a Statement of Net Cost context, is as follows:

Selling Price – Standard Price = Gross and Net Margin

In the above formula, the selling price of an inventory item equates to what is defined in DoD FMR 11B as standard price, which is the cost of inventory plus a surcharge to cover the entity's operating and administrative costs. Normally, selling price would represent a mark-up over inventory cost to generate the entity's gross return (profit) from sales. However, current practice calls for all inventory costs, as well as the operating and administrative cost (surcharge), to be combined together to arrive at standard price. This standard price is the amount charged customers, and hence equals both Gross and Net Margin (or Gross and Net Profit from Sales.)

Following a historical cost-based inventory valuation approach, the formula and the results would be very different from the above, specifically:

Selling Price – Cost of Goods Sold = Gross Margin – Operating Expenses = Net Margin (or Net Cost of Operations)

The use of financial reports that include inventory values derived from actual historical cost records would affect the data used for budget formulation within DON. At present, GF budget formulation involves applying inventory values recorded at standard price in logistics systems to estimate funding requirements (budget/appropriation requests) to be filled by the NWCF. The use of standard stabilized pricing in DoD simplifies the budgeting process. This need not change because of any shift to a new inventory valuation method. However, the method of establishing selling prices would be distinct from the method used to record historical cost-based inventory values on a transaction basis in logistics and financial systems.

The change would affect the manner in which the NWCF compiles administrative operating budgets, as well as the data used during budget formulation. Inventory values alone would not represent the revenue to be earned (or cash to be collected) by the NWCF or the prices to be paid by customers. Rather, inventory costing and the pricing of NWCF goods to be purchased would be separate but related functions.

4.4.2 Accounting Processes

At present, DON has not provided for the proper accounting of some large categories of IRM items that significantly affect the completeness of IRM financial reporting and compliance with relevant standards. These items involve implementing new processes to (1) clearly delineate GF and NWCF financial responsibility before and after material support dates, (2) fully account for the cost of IRM items referred to as sponsor-owned materials, (3) properly record and report IRM items obtained from disposal activities and used in DON operations, and (4) reconcile IRM amounts reported in logistics system and financial system records.

4.4.2.1 GF-NWCF Financial Reporting

To properly report IRM cost, responsibilities for providing logistics support as well as related budgeting, accounting, and financial reporting must be clearly delineated. A key date for this delineation is the material support date, which indicates which DON reporting entity (GF or NWCF) and command (e.g., NAVSEA or NAVSUP) will report the IRM in financial statements. Unless this date and the related events and processes are clearly defined, IRM items may be misclassified in the logistics systems and may be improperly reported in financial statements. We did not find in the DoD FMR or other policy and procedures manuals we reviewed clear and complete guidance for implementation of this date.

4.4.2.2 Sponsor-Owned IRM

At present, SOM is recorded in statistical accounts and aggregated quarterly, essentially to show balances on hand. The amount of SOM in use within DON is material; NAVSEA reported a SOM amount of $1.0 billion. Accounting and financial reporting processes will need to be modified to capture actual cost data for all financial transactions involving these items. Posting logic for both budgetary and proprietary accounting will need to be

developed for these transactions. The system modules handling these materials will need to provide for cost calculations reflecting the valuation methodology selected.

4.4.2.3 IRM Items From Disposal Channels

The process of requisitioning and using items from the DoD's Defense Reutilization and Marketing System (DRMS) will be affected and will need to be examined to determine the appropriate valuation methodology to be applied to items acquired and placed in use from these sources. DON GF activities are encouraged to use/reutilize material held by the Defense Reutilization Marketing Offices (DRMOs) as a viable alternative source of acquiring material. The activities have been informed that each requisition filled with DRMO material results in appropriated money that can be used for other unfunded requirements. This process of acquiring "free" assets from the DRMOs presents several valuation issues that will require resolution to fully implement a historical cost method for all applicable IRM:

- What value should be placed on items obtained in this manner that clearly have some utility to the using activity?
- How will the values assigned affect total and unit inventory cost calculations?
- How should the transactions and related US SGL postings (budgetary and proprietary) be handled in the financial systems?

4.4.2.4 IRM Reconciliation

NAVSUP and DFAS-CL will need to complete a required reconciliation process in order to provide basic inventory data on what inventory values are to be used for financial reporting purposes. At the time of PwC's study, significant differences existed between the ledger values in the MFCS accounting system and the supporting detail records maintained in NAVSUP feeder systems.

Unreconciled differences between feeder and accounting system balances can hinder implementation of a new inventory valuation method. For example, one step in establishing beginning balances (baselining) is to track the inventory balances, by category, back to each of the logistics system. This step would help ensure that all reported amounts are revalued using the new method. If the amounts reported in the different systems do not agree and differences are not reconciled, this step cannot be accomplished.

4.4.2.5 Other Accounting Impacts

Based on information obtained from the NAVSEA POC, there may be other significant OM&S and inventory issues, such as the following.

- The procurement and management of IRM items in "kits" wherein the items are disassembled and separately stored may create item identification and valuation issues.

- IRM items issued to the Fleet and then returned to storage for re-issue (involving GF and NWCF transactions) pose issues for identification of the relevant accounting events, developing posting logic, and properly valuing the items at the various points of the cycle.

4.4.3 System Impact

In this Exploratory phase, PwC did not attempt to identify and assess the relative importance of the logistics/inventory systems in which DON IRM items are recorded. The absence of an accurate list of logistics feeder systems has been reported as a DoD-wide issue. The identification of logistics feeder systems is a necessary first step for assessing the cost and other impact of implementing a historical cost valuation method. The adoption of a new inventory costing method will not affect all logistics feeder systems equally; in fact, some would not be affected at all. For example, DoD and DON may not need to implement a new methodology in systems that (1) do not materially contribute to total IRM balance reportable in required financial reports, and (2) are slated to be phased out (i.e., legacy status) in the relatively near term.

4.4.4 Data Impact

Implementing a new inventory costing method will affect data requirements. These requirements must be identified and checked against the availability of data in current systems. The gaps must then be analyzed and filled to ensure that accounting data required by current standards are recorded and can be properly summarized and reported.

At present, DON and DFAS do not always record and label IRM data in inventory systems and accounting systems in a manner that is consistent with and adequately complies with federal accounting standards. For example, the federal-wide coding scheme prescribed as part of the USSGL by the Department of Treasury generally has not been implemented in NWCF systems (e.g., MFCS). Because of this limitation, DFAS and DON must use conversion tables ("cross-walks") to link ledger account codes in feeder system to USSGL accounts. Our current study and previous efforts with DON indicate this cross-indexing of accounts is complex and can be problematic. The process involves linking numerous unique codes on a system-by-system basis to the USSGL, a process that can be error-prone and can obscure the trail necessary for auditors to verify reported IRM balances and attest to their accuracy.

For the FY 2000 DON GF financial statements, the commands extracted data from twenty-two systems (automated and manual) to arrive at an OM&S balance. These systems use a variety of coding schemes that DoD or DON established long ago primarily to meet budgetary and logistics requirements, and not current CFO Act and federal GAAP requirements. The codes enable DON to record and track a variety of property items, but they are not structured to meet the criteria for OM&S financial reporting.